

REMARKS

Early and favorable reconsideration of this application is respectfully requested in view of the following remarks.

Claims 1, 2 and 4-32 are pending in the present application; all have been rejected. Claims 1, 20 and 22 have been amended to recite a separate adhesive layer; support for this adhesive layer is found at paragraphs 88-93 and thus no new matter has been added by this amendment. Claim 3 has been cancelled and its limitations have been incorporated into claims 1 and 20.

The Examiner has rejected claims 1-25 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter regarded as the invention. Specifically, the Examiner has objected to the characterization that the substrate is between the reactive layer and the laser incident surface because, in some embodiments, the surface purportedly is the substrate. (The Examiner has asserted this limitation is found in claims 1, 24 and 25; the limitation is in claim 1, but not claims 24 and 25.) This rejection is respectfully traversed. Clearly, even if the second substrate of applicants' claims is the outermost layer of a disc, the substrate is going to be between the reactive layer and the laser incident surface of said disc, i.e., the surface that a laser will strike. In fact, U.S. Patent No. 6,866,909 has a similar limitation in its independent claim 1. Thus, it is respectfully submitted such a

limitation is, in fact, sufficiently definite and adequately points out and claims the subject matter regarded as the invention.

The Examiner also asserts the data storage layer should be on the side of the reflective layer opposite the first substrate; however, this is not required. As noted in the specification on page 16 at paragraphs 0056 and 0057:

The data layer(s) for an optical application typically is pits, grooves, or combinations thereof on the first substrate layer. Preferably, the data layer is embedded in the first substrate surface. Typically, an injection molding-compression technique produces the first substrate where a mold is filled with a molten polymer as defined herein. The mold may contain a preform, insert, etc. The polymer system is cooled and, while still in at least partially molten state, compressed to imprint the desired surface features, for example, pits and grooves, arranged in spiral concentric or other orientation onto the desired portions of the first substrate, i.e., one or both sides in the desired areas.

The reflective layer is then applied to the first substrate so that the data layer is disposed between the first substrate and the reflective layer.

Moreover, a similar limitation is found in U.S. Patent No. 6,866,909. Thus, it is respectfully submitted such a limitation is, in fact, sufficiently definite and adequately points out and claims the subject matter regarded as the invention.

The Examiner has rejected claims 1, 2, 4-7, 11-27 and 29-32 under 35 U.S.C. 102(e) as anticipated by U.S. Patent Application Publication No. 2003/0198892 to Ezbiansky et al. (hereinafter Ezbiansky '892). This rejection is respectfully traversed. Nowhere does Ezbiansky '892 disclose or suggest a limited play optical storage media including a first substrate, a reactive

layer comprising at least one reactive material disposed on said at least one reflective layer, an adhesive layer disposed on or included within the reactive layer, an optically transparent second substrate disposed between the reactive layer and a laser incident surface of the optical storage media, and an oxygen permeable barrier layer disposed between said second substrate and a laser incident surface of the optical storage media, said reactive layer having an initial percent reflectivity of about 50% or greater and a percent reflectivity of about 45% or less after exposure oxygen as recited in amended claim 1. Similarly, nowhere does Ezbiansky '892 disclose or suggest a limited play optical storage media having such a configuration utilizing polymethylmethacrylate/ leuco methylene blue in the reactive layer as as recited in claim 20. Finally, nowhere does Ezbiansky '892 disclose or suggest a method for limiting access to data disposed on a data storage media including a barrier layer, an optically transparent second substrate, a reactive layer, and an adhesive layer disposed on or included within the reactive layer, to reach a reflective layer applied to a first substrate having a data storage layer therebetween and reflecting at least a portion of said light back through said layers and reducing the percent reflectivity of the reactive layer to less than about 45% after exposure to oxygen as recited in claim 22.

While Ezbiansky '892 discloses limited play data storage media, and the use of UV-curable adhesives in such media to adhere various layers of the media together, nowhere does Ezbiansky '892 disclose or suggest the use of a separate adhesive layer and a separate barrier

layer as recited in claims 1, 20, and 22. Without such disclosure, Ezbiansky '892 fails to anticipate claims 1, 2, 4-7, 11-27 and 29-32, and withdrawal of this rejection is respectfully requested.

The Examiner has rejected claims 1, 2, 4-7, 11-27 and 29-32 under 35 U.S.C. 102(e) as anticipated by U.S. Patent Application Publication No. 2003/0205323 to Ezbiansky et al. (hereinafter Ezbiansky '323). This rejection is respectfully traversed. Like Ezbiansky '892 discussed above, nowhere does Ezbiansky '323 disclose or suggest a limited play optical storage media including a first substrate, a reactive layer comprising at least one reactive material disposed on said at least one reflective layer, an adhesive layer disposed on or included within the reactive layer, an optically transparent second substrate disposed between the reactive layer and a laser incident surface of the optical storage media, and an oxygen permeable barrier layer disposed between said second substrate and a laser incident surface of the optical storage media, said reactive layer having an initial percent reflectivity of about 50% or greater and a percent reflectivity of about 45% or less after exposure oxygen as recited in amended claim 1. Similarly, nowhere does Ezbiansky '323 disclose or suggest a limited play optical storage media having such a configuration utilizing polymethylmethacrylate/ leuco methylene blue in the reactive layer as as recited in claim 20. Finally, nowhere does Ezbiansky '323 disclose or suggest a method for limiting access to data disposed on a data storage media including a barrier layer, an optically transparent second substrate, a reactive layer, and an adhesive layer disposed on or included

within the reactive layer, to reach a reflective layer applied to a first substrate having a data storage layer therebetween and reflecting at least a portion of said light back through said layers and reducing the percent reflectivity of the reactive layer to less than about 45% after exposure to oxygen as recited in claim 22.

While Ezbiansky '323 discloses limited play data storage media, and the use of UV-curable adhesives in such media to adhere various layers of the media together, nowhere does Ezbiansky '323 disclose or suggest the use of a separate adhesive layer and a separate barrier layer as recited in claims 1, 20, and 22. Without such disclosure, Ezbiansky '323 fails to anticipate claims 1, 2, 4-7, 11-27 and 29-32, and withdrawal of this rejection is respectfully requested.

The Examiner has rejected claims 1, 2, 4-7, 11-27 and 29-32 under 35 U.S.C. 102(e) as anticipated by U.S. Patent No. 6,790,501 to van de Grampel et al. (hereinafter van de Grampel '501). This rejection is respectfully traversed. Like the Ezbiansky references discussed above, nowhere does van de Grampel '501 disclose or suggest a limited play optical storage media including a first substrate, a reactive layer comprising at least one reactive material disposed on said at least one reflective layer, an adhesive layer disposed on or included within the reactive layer, an optically transparent second substrate disposed between the reactive layer and a laser incident surface of the optical storage media, and an oxygen permeable barrier layer disposed between said second substrate and a laser incident surface of the optical storage media, said

reactive layer having an initial percent reflectivity of about 50% or greater and a percent reflectivity of about 45% or less after exposure oxygen as recited in amended claim 1. Similarly, nowhere does van de Grampel '501 disclose or suggest a limited play optical storage media having such a configuration utilizing polymethylmethacrylate/ leuco methylene blue in the reactive layer as as recited in claim 20. Finally, nowhere does van de Grampel '501 disclose or suggest a method for limiting access to data disposed on a data storage media including a barrier layer, an optically transparent second substrate, a reactive layer, and an adhesive layer disposed on or included within the reactive layer, to reach a reflective layer applied to a first substrate having a data storage layer therebetween and reflecting at least a portion of said light back through said layers and reducing the percent reflectivity of the reactive layer to less than about 45% after exposure to oxygen as recited in claim 22.

While van de Grampel '501 discloses limited play data storage media, and the use of UV-curable adhesives in such media to adhere various layers of the media together, nowhere does van de Grampel '501 disclose or suggest the use of a separate adhesive layer and a separate barrier layer as recited in claims 1, 20, and 22. Without such disclosure, van de Grampel '501 fails to anticipate claims 1, 2, 4-7, 11-27 and 29-32, and withdrawal of this rejection is respectfully requested.

The Examiner next rejected claims 1, 2 and 4-32 under 35 U.S.C. §103(a) as obvious over Ezbiansky '892, van de Grampel '501, or Ezbiansky '323. According to the Examiner, it

would have been obvious to use other materials in the reactive layer. However, as noted above, nowhere does Ezbiansky '892, van de Grampel '501, or Ezbiansky '323 disclose or suggest a limited play optical storage media including a first substrate, a reactive layer comprising at least one reactive material disposed on said at least one reflective layer, an adhesive layer disposed on or included within the reactive layer, an optically transparent second substrate disposed between the reactive layer and a laser incident surface of the optical storage media, and an oxygen permeable barrier layer disposed between said second substrate and a laser incident surface of the optical storage media, said reactive layer having an initial percent reflectivity of about 50% or greater and a percent reflectivity of about 45% or less after exposure oxygen as recited in amended claim 1. Similarly, nowhere does Ezbiansky '892, van de Grampel '501, or Ezbiansky '323 disclose or suggest a limited play optical storage media having such a configuration utilizing polymethylmethacrylate/ leuco methylene blue in the reactive layer as as recited in claim 20. Finally, nowhere does Ezbiansky '892, van de Grampel '501, or Ezbiansky '323 disclose or suggest a method for limiting access to data disposed on a data storage media including a barrier layer, an optically transparent second substrate, a reactive layer, and an adhesive layer disposed on or included within the reactive layer, to reach a reflective layer applied to a first substrate having a data storage layer therebetween and reflecting at least a portion of said light back through said layers and reducing the percent reflectivity of the reactive layer to less than about 45% after exposure to oxygen as recited in claim 22.

While Ezbiansky '892, van de Grampel '501, or Ezbiansky '323 disclose limited play data storage media, and the use of UV-curable adhesives in such media to adhere various layers of the media together, nowhere do any of these references disclose or suggest the use of a separate adhesive layer and a separate barrier layer as recited in claims 1, 20, and 22. Without such disclosure or suggestion, none of the references, taken alone or in any combination, render claims 1, 2, and 4-32 obvious, and withdrawal of this rejection is respectfully requested.

Claims 1, 2, 4-7, 11-27 and 29-32 have been rejected under 35 U.S.C. §103(a) as obvious over Murakami et al. JP 60-127542 (hereinafter Murakami '542) in view of U.S. Patent No. 5,815,484 to Smith et al. (hereinafter Smith '484). This rejection is respectfully traversed. Nowhere does Murakami '542 disclose or suggest a limited play optical storage media including a first substrate, a reactive layer comprising at least one reactive material disposed on said at least one reflective layer, an adhesive layer disposed on or included within the reactive layer, an optically transparent second substrate disposed between the reactive layer and a laser incident surface of the optical storage media, and an oxygen permeable barrier layer disposed between said second substrate and a laser incident surface of the optical storage media, said reactive layer having an initial percent reflectivity of about 50% or greater and a percent reflectivity of about 45% or less after exposure oxygen as recited in amended claim 1. Similarly, nowhere does Murakami '542 disclose or suggest a limited play optical storage media having such a configuration utilizing polymethylmethacrylate/ leuco methylene blue in the reactive layer as as

recited in claim 20. Finally, nowhere does Murakami '542 disclose or suggest a method for limiting access to data disposed on a data storage media including a barrier layer, an optically transparent second substrate, a reactive layer, and an adhesive layer disposed on or included within the reactive layer, to reach a reflective layer applied to a first substrate having a data storage layer therebetween and reflecting at least a portion of said light back through said layers and reducing the percent reflectivity of the reactive layer to less than about 45% after exposure to oxygen as recited in claim 22. Without such disclosure, Murakami '542 neither anticipates nor renders the pending claims obvious.

Smith '484 fails to remedy the deficiencies of Murakami '542. While Smith '484 discloses data storage media which limit continual access to stored data, nowhere does Smith '484 disclose or suggest a limited play optical storage media including a first substrate, a reactive layer comprising at least one reactive material disposed on said at least one reflective layer, an adhesive layer disposed on or included within the reactive layer, an optically transparent second substrate disposed between the reactive layer and a laser incident surface of the optical storage media, and an oxygen permeable barrier layer disposed between said second substrate and a laser incident surface of the optical storage media, said reactive layer having an initial percent reflectivity of about 50% or greater and a percent reflectivity of about 45% or less after exposure oxygen as recited in amended claim 1. Similarly, nowhere does Smith '484 disclose or suggest a limited play optical storage media having such a configuration utilizing polymethylmethacrylate/

leuco methylene blue in the reactive layer as recited in claim 20. Finally, nowhere does Smith '484 disclose or suggest a method for limiting access to data disposed on a data storage media including a barrier layer, an optically transparent second substrate, a reactive layer, and an adhesive layer disposed on or included within the reactive layer, to reach a reflective layer applied to a first substrate having a data storage layer therebetween and reflecting at least a portion of said light back through said layers and reducing the percent reflectivity of the reactive layer to less than about 45% after exposure to oxygen as recited in claim 22.

Without such disclosure or suggestion, neither Murakami '542 nor Smith '484, taken alone or in any combination, render claims 1, 2, 4-7, 11-27 and 29-32 obvious, and withdrawal of this rejection is respectfully requested.

Claims 1, 2, 4-7, 11-27 and 29-32 have been rejected under 35 U.S.C. §103(a) as obvious over Murakami '542 in view of Smith '484, further in view of Breitung et al. WO 02/075733 (hereinafter Breitung). This rejection is respectfully traversed. As noted above, neither Murakami '542 nor Smith '484 disclose or suggest the use of media having the multiple layers of the instant application, including multiple substrates, and separate adhesive and barrier layers. Breitung fails to remedy the deficiencies of Murakami '542 and Smith '484, no matter how these references may be combined. While Breitung discloses a reactive layer and the use of UV curable resin thereover, nowhere does Breitung disclose or suggest a limited play optical storage media including a first substrate, a reactive layer comprising at least one reactive material

disposed on said at least one reflective layer, an adhesive layer disposed on or included within the reactive layer, an optically transparent second substrate disposed between the reactive layer and a laser incident surface of the optical storage media, and an oxygen permeable barrier layer disposed between said second substrate and a laser incident surface of the optical storage media, said reactive layer having an initial percent reflectivity of about 50% or greater and a percent reflectivity of about 45% or less after exposure oxygen as recited in amended claim 1. Similarly, nowhere does Breitung disclose or suggest a limited play optical storage media having such a configuration utilizing polymethylmethacrylate/ leuco methylene blue in the reactive layer as as recited in claim 20. Finally, nowhere does Breitung disclose or suggest a method for limiting access to data disposed on a data storage media including a barrier layer, an optically transparent second substrate, a reactive layer, and an adhesive layer disposed on or included within the reactive layer, to reach a reflective layer applied to a first substrate having a data storage layer therebetween and reflecting at least a portion of said light back through said layers and reducing the percent reflectivity of the reactive layer to less than about 45% after exposure to oxygen as recited in claim 22.

Without disclosing or suggesting a device having the layers described above and claimed herein, Breitung fails to remedy the deficiencies of Murakami '542 in and Smith '484, no matter how these references are combined, and withdrawal of the rejection of claims 1, 2, 4-7, 11-27 and 29-32 is respectfully requested.

The Examiner has next rejected claims 1 and 3-32 under 35 U.S.C. §103(a) as obvious over Smith '484 in view of Akiyama et al. JP 60-261046 (hereinafter Akiyama '046) or Akiyama et al. JP 60-256944 (hereinafter Akiyama '944). This rejection is traversed. As noted above, nowhere does Smith '484 disclose or suggest the use of media having the multiple layers of the instant application, including multiple substrates and separate adhesive and barrier layers. Neither Akiyama '046 nor Akiyama '944 remedy the deficiencies of Smith '484.

While Akiyama '046 disclose a coating over a 2-layer structure, and Akiyama '944 discloses a protective film coating which may be cured, nowhere does Akiyama '046 or Akiyama '944 disclose or suggest a limited play optical storage media including a first substrate, a reactive layer comprising at least one reactive material disposed on said at least one reflective layer, an adhesive layer disposed on or included within the reactive layer, an optically transparent second substrate disposed between the reactive layer and a laser incident surface of the optical storage media, and an oxygen permeable barrier layer disposed between said second substrate and a laser incident surface of the optical storage media, said reactive layer having an initial percent reflectivity of about 50% or greater and a percent reflectivity of about 45% or less after exposure oxygen as recited in amended claim 1. Similarly, nowhere does Akiyama '046 or Akiyama '944 disclose or suggest a limited play optical storage media having such a configuration utilizing polymethylmethacrylate/ leuco methylene blue in the reactive layer as as recited in claim 20. Finally, nowhere does Akiyama '046 or Akiyama '944 disclose or suggest a

method for limiting access to data disposed on a data storage media including a barrier layer, an optically transparent second substrate, a reactive layer, and an adhesive layer disposed on or included within the reactive layer, to reach a reflective layer applied to a first substrate having a data storage layer therebetween and reflecting at least a portion of said light back through said layers and reducing the percent reflectivity of the reactive layer to less than about 45% after exposure to oxygen as recited in claim 22.

Without disclosing or suggesting a device having the layers described above and claimed herein, Akiyama '046 and Akiyama '944 fail to remedy the deficiencies of Smith '484, no matter how these references are combined, and withdrawal of the rejection of claims 1, and 3-32 is respectfully requested.

The Examiner has next rejected claims 1 and 3-32 under 35 U.S.C. §103(a) as obvious over Smith '484 in view of Akiyama '046 or Akiyama '944, further in view of Breitung. This rejection is respectfully traversed. As noted above in detail, nowhere does Smith '484, Akiyama '046, Akiyama '944, or Breitung, taken alone or in any combination, disclose or suggest the use of media having the multiple layers of the instant application, including multiple substrates and separate adhesive and barrier layers. Thus, without such disclosure, none of the cited references, alone or in any combination, render claims 1 and 3-32 obvious, and withdrawal of this rejection is respectfully requested.

Finally, the Examiner has rejected claims 1,2 and 4-32 on the ground of nonstatutory obviousness type double patenting over claims 1-39 of U.S. Patent No. 6,790,501 (van de Grampel '501). As noted above, nowhere does van de Grampel '501 disclose or suggest the media of the present application, and withdrawal of this rejection is respectfully requested.

It is believed that the claims of the application, i.e., claims 1, 2 and 4-32, are patentably distinct over the art of record and are in condition for allowance. In the event that the examiner believes that a telephone conference or a personal interview may facilitate resolution of any remaining matters, the undersigned may be contacted at the number indicated below. In view of the foregoing amendment and remarks, early and favorable action on this application are earnestly solicited.

Respectfully submitted,



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